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10/017,328	12/14/2001	Mario Tenuta	2527-1A1	1143
7590	07/25/2005		EXAMINER	
Eric Fincham 316 Knowlton Road Lac Brome, QC J0E 1V0 CANADA			NAFF, DAVID M	
			ART UNIT	PAPER NUMBER
			1651	

DATE MAILED: 07/25/2005

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/017,328  
Filing Date: December 14, 2001  
Appellant(s): TENUTA ET AL.

Eric Fincham  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed May 9, 2005.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences, which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 2 and 5.

Claims 1, 3 and 4 have been canceled.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

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**(6) Issues**

The appellant's statement of the issues in the brief is correct.

**(7) Grouping of Claims**

The rejection of claims 2 and 5 stand or fall together because appellant's brief does not include a statement that this grouping of claims does not stand or fall together and reasons in support thereof. See 37 CFR 1.192(c)(7).

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

6,300,282 B1	Cooley	10-2001(filed 7-99)
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5,783,411	Schisler et al	7-1998
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Blodgett, et al. "Relative Effects of Calcium and Acidity of the Soil on the Occurrence of Potato Scab" American Potato Journal, Vol. XII, No. 10 (October 1935), pp. 265-274.

Menzies, J.D., "Potato Scab Control With Calcium Compounds" Phytopathology, Vol. 40 (1950), p. 968.

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**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blodgett et al in view of Cooley and Schisler et al, and if necessary in further view of Menzies et al.

The claims are drawn to a method of controlling soilborne pathogens in soil having an organic carbon content of less than 1.7% by weight by generating ammonia in the soil by adding a nitrogen containing material and an agent to raise the pH of the soil to above 8.5. Claim 5 requires the agent for raising the pH to be selected from calcium hydroxide, calcium oxide, sodium hydroxide and potassium hydroxide.

Blodgett et al disclose that as pH increases from 7.2 to 9.2, the amount and severity of scab decreased (page 271, Figure 2, page 272, first paragraph and page 273, Table 3) when growing potatoes in sandy loam soil (page 271, under "In the alkaline range"). Additionally, when a soil heavily infected with potato scab is limed ( $\text{Ca}(\text{OH})_2$ ) to raise the pH to 8.5, 47% of potatoes were clean, and when limed to pH 9.0, 91% of the potatoes were clean (page 272, 3<sup>rd</sup> paragraph).

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Cooley discloses conditions for growing of potatoes (col 1, lines 30-45). Potatoes require significant amounts of nitrogen, and fertilizer containing nitrogen, Phosphorus, and potassium is typically added to the soil where the potato seed piece is to be planted, just prior to or at planting. Then, about a week after plants emerge in mid- to late-May, another nitrogen fertilizer application is often made, for example, by dripping liquid urea ammonium nitrate of from 28% to 32% nitrogen onto the sides of the hill, or applying a granular ammonium nitrate onto the sides of the hill. A hiller attachment then throws soil onto the sides of the hill to cover the newly-applied nitrogen fertilizer. This process is typically repeated a second time 7-10 days later. By this time, the potato plants will have become too large to send the fertilizer/hiller equipment through the fields. So, if further nitrogen supplements are required, a liquid nitrogen fertilizer such as liquid urea ammonium nitrate is sent through the irrigation water.

Schisler et al disclose (col 8, line 64) sandy clay loam field soil for growing potatoes having an organic matter content of 1.3%.

Menzies et al disclose (page 968, second full paragraph) that in greenhouse experiments with alkaline soil, potato scab decreased with increasing pH or lime. When adding calcium oxide

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and using sandy loam soil, control was obtained when the pH was above 8.1. When making soil alkaline with sodium carbonate and treating with calcium compounds, scab control was best with calcium sulfate. Results indicated that scab in alkaline soil corresponded to both calcium and pH, and when the pH is raised above 8.0, control of scab varies with the source of calcium.

When growing potatoes in soil limed to pH 9.0 that results in 91% clean potatoes without scab which is a soilborne pathogen as suggested by Blodgett et al, it would have been obvious to apply liquid urea ammonium nitrate or granular ammonium nitrate to the soil to supply nitrogen as suggested by Cooley that is conventionally applied when growing potatoes to supply nitrogen required by the potatoes. The added urea ammonium nitrate or ammonium nitrate will inherently generate ammonia. The sandy loam soil of Blodgett et al will contain less than 1.7% organic carbon content as suggested by Schisler et al disclosing sandy clay loam field soil for growing potatoes having an organic matter content of 1.3%. If needed, Menzies et al would have further suggested growing potatoes in alkaline pH soil having less than 1.7% organic carbon from disclosing that growing potatoes in alkaline sandy loan soil reduces potato scab.

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**(11) Response to Argument**

Appellants urge that Blodgett et al do not disclose an organic carbon content of below 1.7%, and that sandy loam soil can contain a higher organic carbon content. However, Schisler et al disclosing sandy clay loam soil having an organic matter of 1.3%, supports that the sandy loam soil of Blodgett et al has an organic carbon content below 1.7%. Even if sandy loam soil can contain above 1.7% organic carbon, this would appear to occur rarely, and not be typical.

Appellants urge that the 1.3% organic matter content of Schisler et al cannot be read into Blodgett et al. However, Schisler et al is growing potatoes in a sandy loam soil that is the same type of soil Blodgett et al use for growing potatoes. No reason is apparent why the sandy loam soil of Blodgett et al will not contain an organic matter content as disclosed by Schisler et al. Appellants have provided no evidence supporting that the sandy loam soil of Blodgett et al will contain above 1.7% organic carbon.

Appellants urge that Cooley does not suggest adding nitrogen in combination with other ingredients to generate ammonia in the soil to control soilborne pathogens. However, Cooley is combined with Blodgett et al, and it would have been obvious to add nitrogen as suggested by Cooley when potatoes are

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grown in the limed soil of Blodgett et al for the same reason nitrogen is added to any other soil for growing potatoes, i.e. to provide the nitrogen needed by potatoes to increase yield, which is sufficient motivation for adding nitrogen to limed soil when growing potatoes.

Appellants cite *Ex parte Walker*, 135 USPQ 195 and *In re Imperato*, 179 USPQ 730 where it is set forth that in addition to the references being capable of being combined, the art must contain something to suggest the desirability of the combination. However, in the present case, there is clearly something to suggest the desirability of the combination. It is clear from Cooley that potatoes need significant amounts nitrogen for growth, and providing nitrogen as suggested by Cooley to potatoes grown under alkaline conditions as disclosed by Blodgett et al is clearly desirable to obtain an acceptable yield of potatoes. The urea ammonium nitrate or ammonium nitrate disclosed by Cooley will provide ammonia as claimed.

In response to appellants' argument that the references must disclose the result of ammonia controlling soilborne pathogens, the fact that appellants have recognized another advantage, which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious.

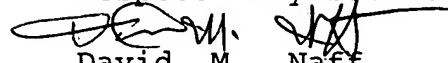
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See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). Appellants have provided no evidence supporting that pathogens will not be controlled when ammonia results from adding urea ammonium nitrate or ammonium nitrate as suggested by Cooley to potatoes grown under alkaline conditions as suggested by Blodgett et al. Potato scab is a soilborne pathogen, and supplying nitrogen as suggested by Cooley to potatoes grown at pH 9.0 as disclosed by Blodgett et al will inevitably result in control of potato scab.

For the above reasons, it is believed that the rejection should be sustained.

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Respectfully submitted,


  
David M. Naff  
Primary Examiner  
Art Unit 1651

DMN

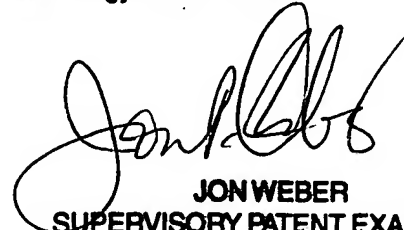
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